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Agricultural.

NOTES BY THE WAY.

S. Clair County—A Visit to Some of its Shorthorn Herds—A County that is Making Rapid Progress in Stock Breeding.

A visit to that portion of St. Clair County which lies along the beautiful river of that name at this season of the year is a most enjoyable one, and certainly the editor of the FARMER will long remember the one paid us days ago, in company with Mr. Geo. F. Phillips, the veteran Shorthorn breeder of Macomb County. Meeting him at Ridge-way, on the Grand Trunk railroad, we started for the town of St. Clair, on the branch line of the Canada Southern. Whoever has not seen St. Clair in the month of June or early in July has yet something to look forward to. It is so beautifully located, its streets well shaded with magnificent trees, its main street, running parallel with the river, affords the visitor such beautiful views, that it should be visited by every one who has not realized how very beautiful some of our Michigan towns are. At the station the genial face of Mr. Charles F. Moore was seen in the crowd, and Mr. and Mrs. Phillips and the FARMER representative were soon speeded toward his farm and residence.

This farm is only a few blocks from the main street of St. Clair, and next to the breeding stables of Mr. Mark Hopkins. It is nicely rolling, soil of all varieties, from a strong clay to a sandy loam, and even some sandy ridges. It consists of about 180 acres, lying on both sides of the road, and is well adapted to stock-raising. Mr. Moore is adding another magnificent barn to his already fine buildings, a proceeding rendered necessary by the rapid increase of his herd of Shorthorns. The stables as arranged for the cattle will meet the approval of practical men. They are roomy, well lighted and ventilated, and the arrangements for feeding and caring for the stock excellent. The windows for lighting are provided with blinds, which allows them to be darkened while the flies are bad without interfering with the ventilation. In the stables we found the calves and the bulls, which are turned out after the air cools off in the afternoon. The cows and heifers were all in the pastures, and were looking in prime condition for breeding stock. The herd at present consists of 24 head of females, divided up as follows: Kirklevingtons, 3; Barringtons, 1; Tea Rose, 15; Victorias, 3; Oxford Vanquishes, 2. Besides these are the bull Kirklevington of Erie 44182, and three Kirklevingtons, which are owned in company with Mr. John P. Sanborn, of Port Huron. Mr. Moore also has the young bulls 4th and 5th Tea Rose Dukes, and a red bull sired out of the Oxford Vanquish cow purchased at the McPherson sale. The Barrington cow, Countess of Barrington, 10th, is the one purchased at the Attrill sale at Dexter Park last fall, and she is looking fine. She is in calf to Mr. Attrill's bull Grand Duke of Ridgewood 69965. This cow was bred by the Duke of Devonshire and imported by Mr. Attrill. She was sired by Duke of Gloucester 7th (39735), her dam being Countess of Barrington 5th by Duke of Tresander 2d (26022). This cow is a prize to any breeder, and should lay the foundation of a family of Barringtons in this herd which will be second to none in breeding.

The Kirklevington, a family to which Mr. Moore is very partial, is represented by three heads, namely, Kirklevington Duchess 15th, by imp. Kirklevington Duke (41768), out of imp. Kirklevington Duchess 5th, by 3d Duke of Bowley (38441); Kirklevington Duchess 13th by Duke of Hillsdale 43429, out of Kirklevington Duchess 5th by Kirklevington Duke (41768); and Kirklevington Duchess 10th, also by Duke of Hillsdale 43429, out of imp. Kirklevington Duchess 10th by imp.

Kirklevington Duke (41768). These three heifers were all calved in 1884, all red in color, and their breeding certainly is as fine as could be wished for.

The Tea Rose family comprises 15 head, and they have done well on this farm. Take them as a whole and it would be difficult to find the same number of one family in any one's herd which will out-sow them, or do better as regular breeders and good milkers. The bull calves raised from them are at the head of three or four herds in the State, and we know they have given the greatest satisfaction. Mr. Phillips took to this family at once, and in fact visitors to this farm cannot but be favorably impressed with their general appearance, and the evidence they show of individual merit.

The Victorias, three in number, are of very fine breeding, tracing through six high bred Bates bulls to the imp. cow Victoria 26th by Brokenhorn (12500), thence to the cow No. 1 of Mason's sale by Cato 119, and thence to that grandold cow Lady Maynard. These females are all young, and in good shape.

The Oxford Vanquish cow and heifer calf purchased at the McPherson sale have improved greatly, and the cow now has a red bull calf by her side.

As for the young calves, there are some very choice ones, all sired by Lord Kirklevington of Erie 44182, the bull owned in company with Mr. Sanborn, whose breeding we have frequently referred to in the FARMER. One of the calves by him and from the original Tea Rose cow in the herd, a large broad backed cow, yellowish red and white, has been steered and is being fed by Mr. Moore to show what a high bred Shorthorn will do as a meat producer. This calf is a beauty, red and white in color, now seven months old, and looks like a yearling. Up to six months old he made an average gain of 340-400 lbs. per day.

Here we saw a very nice red heifer owned by Judge Eldridge, of Mt. Clemens, bred by Mr. Geo. W. Phillips, sired by Rufus 19275 and out of Phoenix 10th.

While here Mr. John P. Sanborn, with Mr. F. Wastell, of Port Huron, drove down and invited the party to go up to Port Huron the next day and see his herd of Shorthorns, an invitation which was accepted.

Mr. Moore has been largely interested in horses, and has a number of brood mares, young stallions, fillies and colts on the farm. He has decided to close them all out, as he finds he has not room on his farm for them and as many Shorthorns as he proposes keeping as a breeding herd. The brood mares were carefully selected, and include some choice animals, mostly Canadian and Clydes, with a few roasters. A horse breeder can secure some bargains here.

Next morning the party started for Port Huron on the steamer, and had a pleasant sail on the St. Clair. Mr. Moore and Mr. James Sanborn also came along. After lunch at Mr. John Sanborn's the party were driven out to the stock farm of the latter. Here the Shorthorn has had an abiding place for the past fourteen years. In connection with Messrs. Avery & Murphy, Mr. Sanborn made Port Huron known all over the country as the home of two noted Shorthorn herds. The influence of these herds has been felt all over Michigan, and there are very few herds in the State to-day which do not contain more or less of their blood. In fact the establishment of those herds at Port Huron marked an era in the history of Shorthorn breeding in the State, and while the proprietors undoubtedly sacrificed a large amount of money, there is no saying how great a benefit the State derived from their becoming interested in breeding Shorthorns.

The Sanborn herd is largely made up of one family, that of the Victoria, or Victoria Duchesses as they are known by many. The foundation was the cow No. 1 of the Mason sale, running back to Lady Maynard. This family is held in highest esteem in England, and in this country the cows have been topped by the highest bred Bates bulls, Dukes and Oxford, which could be procured. A number of the older cows were sired by 23d Duke of Airdrie 19393, others by 3d Grand Duke of Airdrie 32760, a son of the 23d Duke, and out of Victoria Duchess 5th by 4th Lord Oxford 5903, and the younger ones by Lord Kirklevington of Erie 44182. Then there are the three Kirklevingtons cows owned in company with Mr. Moore, Kirklevington Lady 5th, 6th and 7th, the first sired by 3d Grand Duke of Airdrie 32760, and the other two by Lord Kirklevington of Erie 44182, besides some half a dozen of the Magenta family.

As the herd comprises so many animals tracing to one line of blood, it was to be expected that it would show considerable uniformity, and in this respect the visitor will not be disappointed. There are six Victoria bulls, in age running from three years to less than a year, four sired by Lord Kirklevington of Erie 44182, and the two oldest by 3d Grand Duke of Airdrie 32760. Either of these bulls is good enough to go to the head of any herd individually, and as for their breeding it shows for itself. There are three other young bulls bred from the Magenta family which are also good ones. The herdsmen drove into the yard from the pastures a 14 yearling and two year-old heifers, and we can say that a handsome lot we never saw in one man's herd. Two two-year-olds, from their fine proportions and grand style, were selected as perhaps the choice of the lot. One of these is Victoria Duchess 25th, born with a little white, two years old in March, sired by Lord Kirklevington of Erie 44182, dam Victoria Duchess 7th, by 23d

DUKE OF AIRDRIE 19393. In rib, back, loin and quarters she is nearly perfect. Through the crop she is especially good. The other, Victoria Duchess 26th, is a red roan, two years old in February last, by Grand Duke of Connaught 46202, now at the head of the Rumsey herd, dam Victoria Duchess 18th, by 23d Duke of Airdrie 19393; g. dam, Victoria Duchess 8th, by 23d Duke of Airdrie 19393. The party was nearly divided as to which of these two heifers was the best. We favored the roan, as we thought she was slightly the best in the back and loin; in no other point, however, could we see the slightest difference in favor of one over the other. Two other choice ones were Victoria Duchess 29th and Victoria Duchess 31st, neither of them yet two years old. The younger ones, generally a little over a yearold, were very neat animals, one, a half sister to the roan two-year-old, just mentioned, is remarkably good. Her sire was Lord Kirklevington of Erie 44182, and both dam and grand dam were by 23d Duke of Airdrie 19393.

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The meeting of the West Michigan fruit-growers at South Haven recently, furnished the opportunity of meeting many of the noted fruit men of the east shore of Lake Michigan, and of looking over some of the many fine fruit farms in that vicinity. This port is the southernmost point from which peaches are now shipped in any quantity, and that they now have trees exempt from the yellows, is due to the fact that they fought the disease with axe and fire from the first. The Benton Harbor district, where the peach industry was swept out of existence in a few years by the disease, by the let-alone fallacy, was an example and a warning which led the fruitgrowers of South Haven to exert themselves to beat back so malignant a foe. At the weekly meetings of their local Horticultural Society, the master was persistently presented, and a co-operative action secured, which has proved the wisdom of the course. It took a good deal of nerve to sacrifice a tree loaded with fruit when perhaps only half a dozen specimens on one side showed the premonitory symptoms of the yellows. One grower cut 70 trees one year at the first onset of the disease, but by a vigorous watchfulness, two or three trees per year is now the usual average. By saying that breeders who visit this herd will be as much surprised as we are at its members, condition and individual merit. We did not see a poor animal in the lot, which certainly speaks well for the herdsmen who has them in charge.

At the farm we met with Mr. George Torrance connected with the celebrated herd of Mr. A. Cruikshank, of Sittiton, Scotland, and now running a dairy farm in the vicinity. He is a great admirer of the Shorthorn, and evidently a judge of what a good one should be.

There are several other matters in connection with this farm we should like to refer to, but space forbids us saying anything more this week.

HYBRIDIZING WHEAT.

To the Editor of the Michigan Farmer.

I wish to ask you a few questions with regard to wheat. Some of our farmers are buying seed wheat, paying \$25 for three bushels, called the New Mediterranean Hybrid. The wheat to look at would include a mixed wheat of Mediterranean and Deli. I raised a specimen, with a wish to ask you if the wheat will, by sowing, reproduce the cross? Or does it show mixed wheat? The parties selling have a piece of this wheat near Saline. They claim the cross is produced with an instrument, using pollen of the other kind on the male wheat. Does wheat grow separate stalks or heads, male and female, and how is the male wheat distinguished from the female? I find our agriculturists say much more about strawberries than wheat.

B. NORTH.

All of our kinds of wheat belong to one species, and therefore cannot be hybrids one with another. They may be cross-bred. This is done by carefully removing the stamens, or male element, before any of the pollen has been scattered or matured. In place of this the chaff is carefully spread, and pollen from another sort is applied. An expert may fix one spike in half a hour or so. It is delicate work and can not well be done except by a botanist, or one who has been shown the operation. Wheat in the field does not often mix with wheat near by, as does one lot of Indian corn with another. Wheat is close fertilized, each kernel being fertilized by pollen in the same chaff. After cross fertilization it will take about five years of selection of certain types before each will become fixed so it will come true to seed. In other words, after crossing two sorts the progeny will breed up into many sorts.

Each flower of wheat contains both the male and the female elements.

The breeding and selection of better sorts of wheat deserves vastly more attention than it has ever received. Judging from the above letter, I should question whether the "new" wheat is worth the price asked.

W. J. BEAL,
Professor of Botany, Agricultural College.

Another Wheat Pest.

Two correspondents of the *Country Gentleman*, writing from different States, report the discovery of a worm that is doing great damage in the wheat fields. One of the correspondents describes the pest as being about an inch long, greenish in color, with a brown head, the body tapering from head backwards, no tail and ten pairs of feet. The worms, the correspondent states, do not attack the blade of the head, but crawl up the stalk, strip off the head, and feed upon the headless stalk, apparently enjoying the soft green straw. The loss, as estimated by one of the correspondents, is fully ten per cent.

Prof. Lintner, entomologist, of New York State, is of opinion that the specimens sent him indicate that the wheat fields are to be subjected to a new pest, as nothing like it has come under his observation in the past. He is inclined to believe that it is related to the sawfly species of which have committed serious depredations on small fruits. Prof. Lintner closely observed the habit of the worms and found that they had three pairs of long legs and eight pairs of conspicuous prolegs. The head is large, round and flattened, white in front, black on the sides and brown above. The entire length of the worm is an inch and a tenth, and the color of its body closely resembled that of a stalk of grass, which the worms were fed upon. If disturbed, they draw the heads inward, elevate the terminal ends or emit a liquid, after the manner of many of the sawfly larvae.

NOTES FROM SOUTH HAVEN.

that the yearly average production per acre from this section of land is greater than from any other single section of arable land in the State, and they offer to prove it by their bank accounts.

C. Merritt, a little north of this, has the model acre of Niagara grape vines. They are trellised to four wires on horizontal bars; they are set eight feet each way, and there is not a break anywhere. The rows are uniform in density from end to end, and from side to side. It is a model acre, and I challenge the State to produce anything finer. Near here Mr. Griffin leads one gradually up to his climax—800 peach tree four years old. The person who don't go into ecstasies over these trees well merits his utter disgust. The first tree is a round topped model and every other tree is its equal. The ground under the trees is as clean and smooth as a machine swept pavement. The trunk of the second tree is about three and a half feet, and the branches of every other tree spring from the same height. Every person among these intelligent fruit growers seems to have something "way up" above the average and the visitors is sized up according to the degree of appreciation which he evinces for the climaxes which they spring upon him. They delight in seeing the eyes of a novice bulge. Even the Governor put his foot in it bad that day, by asking for what crop they were preparing the ground under the trees so nicely. It is account for the quality of such plain rams as the renowned Addison, Genesee, Hopeful, Bob Lusk, and others I could mention.

As an evidence of the solid value of the industry here, I learn from Hon. C. J. Monroe, the president of the bank, that in 1881, the last full bearing year, they paid through the bank for fruit 181,000,000. Estimated amount paid to shippers in Chicago, and received in currency for sale to local speculators \$30,000, making \$155,012.99 realized for fruit that year. There had been paid out through the bank for strawberries to June 25th, \$10,000. The estimate from date at hand is that this year's crop of peaches will yield 300,000 baskets to be shipped at South Haven, and the small fruit will be increased one-third. I have statements kindly furnished me by several of the growers showing the profit of peach growing, but which I have concluded not to publish. There was a gradual ascent of the solution, known by the coloring of the inner bark of the limbs. Upon this hasty hypothesis the sulphate was sown. It is not certain that the roots when left to their choice will take up so acrid a solution from the soil, and farther experiment is necessary before the idea will be generally accepted. The plan almost universally adopted is to sow winter rye at the last cultivation in summer. The rye, before winter, is a protection from winds, would otherwise drift the soil away from exposed places. It also holds the falling leaves and thus blankets the earth for protection in winter. The rye is turned under in May before it gets its growth. If left later it does not rot and serves to dry out the soil. Not so much dependence is placed upon the added fertility to the soil by plowing it in, as upon the incidental benefit which its growth yields.

The plowing in spring is between the rows the same way every year, but toward the trees and away from them in alternate seasons. Some growers on heavy soil ridge up the rows permanently to facilitate drainage, and to keep the feeding roots above water. The strip of land bordering the lake, within a mile from the shore, is the favorable limit here for peaches, due entirely to the contour of the land. Back from this the surface widens the other way, and frosts and 30 deg. below zero reign over all, as well as in inland places. Further north, at Douglas and Fennville, the peach belt defects further from the shore and increases the width where the annual success with peaches seems sure. State Senator C. J. Monroe has a fine residence and farm of over 300 acres two miles southeast from the town. Although within the charmed peach circle, his soil seems ill adapted to the wants of the trees, and they fail before maturity. He is tilling his land, and hopes yet to succeed in raising peaches. Mr. Monroe thinks it needs more with means and muscle, and both well topped off with brains, to succeed in fruit growing. From the observatory at the top of his house, some of the noted fruit farms can be seen, and a beautiful view of the lake and the shore line is obtained. The milk supply for the town comes from this farm. The stables are patterns of conveniences and neatness. The milking floors are provided with blinds, to be closed when the cows are to be milked; here in partial darkness and silence, the dancing of the milk streams into the pails is all that can be heard. His men are domiciled in cottages on the grounds, where they live the year round. The buildings make quite a suburban appearance, and reflect great credit upon the taste and managing ability of the owner.

T. A. Bixby is one of the old fruit growers, living two miles north of the town. He carries on quite extensive farming operations in connection with peach growing. He is the Shropshire sheep man of that whole region, and has a flock of over 50 pure bred sheep. He has several imported animals. This year's crop of lambs are perfect specimens of the breed, and he shows with a good deal of pride, his yearling flock. The pedigrees are all straight, for he had some of them framed, and the chirography was in clear John Hancock style. Any one visiting South Haven this fall in quest of big sheep and large peaches, I can command them to my friend, Bixby for satisfaction. Across the road from Mr. Bixby lives another big-hearted king fruit grower—Mr. Sheffer. From the observatory of his house can be seen a solid section of fruit trees and plantations. It is believed

the neck, and give a more stylish and a thicker fleeced offspring, carrying more cleaned wool than plain rams.

During the last twenty years much has been said and written in condemnation of wrinkly,

The Horse.

Dates Claimed for Trotting Meetings.

Detroit, Mich.	July 20 to 23
Cleveland, O.	July 27 to 30
LaSalle, Ill.	Aug. 3 to 5
Ottawa, Ill.	Aug. 3 to 5
Carthage, O.	Aug. 3 to 5
Jamestown, O.	Aug. 3 to 5
Hillsboro, O.	Aug. 3 to 5
Joliet, Ill.	Aug. 10 to 13
Rochester, N. Y.	Aug. 17 to 20
Utica, N. Y.	Aug. 17 to 20
Chicago, Ill. (Northwest'n Breeders)	Aug. 17 to 20
Streator, Ill.	Aug. 17 to 20
Eau Claire, Iowa	Aug. 23 to 27
Fergus Falls, Minn.	Aug. 24 to 27
Albany, N. Y.	Aug. 24 to 27
Concord, Ky.	Aug. 24 to 27
Watson, N. Y. (C. W. N. Y. B. A.)	Aug. 24 to 27
Springfield, O.	Aug. 24 to 27
Columbus, O.	Aug. 29 to Sept. 3
Lockford, Ill.	Sept. 3 to 6
Pittsburgh, Pa.	Sept. 3 to 6
Des Moines, Ia.	Sept. 3 to 6
Chicago, Ill.	Sept. 6 to 10
Omaha, Neb.	Sept. 6 to 10
Kalamazoo, Mich. (Mich. T. H. B. A.)	Sept. 7 to 9
Belvidere, Ill.	Sept. 7 to 10
Kalamazoo, Mich.	Sept. 7 to 10
Fort Wayne, Ind.	Sept. 13 to 17
Detroit, Mich.	Sept. 13 to 15
Kansas City, Mo.	Sept. 13 to 18
Woodstock, Ill.	Sept. 17 to 21
Poughkeepsie, N. Y.	Sept. 14 to 17
Cleveland, O.	Sept. 14 to 17
Mystic Park,	Sept. 14 to 17
Washington, D. C.	Sept. 14 to 17
Grand Rapids, Mich.	Sept. 20 to 24
South Bend, Ind.	Sept. 20 to 25
Reading, Pa.	Sept. 21 to 24
Lebanon, O.	Sept. 21 to 24
Liberon, Ill.	Sept. 21 to 24
Oregon, Ill.	Sept. 21 to 24
Lexington, Ky.	Sept. 27 to 30
Dayton, O.	Sept. 27 to Oct. 2
Indiana, Ind.	Sept. 27 to Oct. 2
Waukegan, Ill.	Sept. 27 to Oct. 2
St. Louis, Mo.	Oct. 4 to 9
Dowagiac, Mich.	Oct. 4 to 9
Greenwood, Ind.	Oct. 15 to 18
Centreville, Mich.	Sept. 28 to Oct. 1
Bloomsburg, Pa.	Oct. 13 to 16

A ROYALLY BRED YOUNGSTER.

The two year old colt recently registered as Nottingham 4993, is a good illustration of the progress that is being made in the evolution that is to result in the perfect trotting horse.

This young stallion is the first and only one that has yet been bred, whose sire and dam each have a record better than 2:20, and if there is anything in the maxim—"Breed to the winners," he ought to be a great one, both as a performer and as a stock horse.

Nutwood, his sire, has a record of 2:18%, has 36 heats in 2:30 or better to his credit, and at the close of the season of 1885, when he was fifteen years old, had got eight trotters and one pacer who had entered the 2:30 list, one of them, Felix, having a record of 2:19%, and another one, Nutbreaker, leaving a yearling record of 2:42%, a two year old record of 2:29, and promising the present season to lower the best three year old record of 2:19%, now held by Linda Rose and Patron.

In conformation and disposition Nutwood is simply perfection, and it can truthfully be said that at the present time he is the most popular stallion in Kentucky, deservedly receiving the approval of the most intelligent breeders and horsemen in the country. The combination of Hambletonian, Manbrino Chief, and Pilot Jr. blood in his veins and in connection with other approved seems to be the par excellence of breeding, strains to make the road to success very plain.

Adelaide, the dam of Nottingham, was one of the best trotting mares that ever came to the score. She commenced her career in 1874, getting a record of 2:31%, which she reduced in 1875 to 2:22%, in 1876 to 2:21%, and in 1878 to 2:19%. She has 67 recorded heats in 2:30 or better, and many of her races were won from faster horses by reason of her ability to outlast them. She was sired by Phil Sheridan 226%, by Young Columbus 2:35%, and by Old Columbus, a Canadian pacer that was also a fast trotter and founded the Columbus family. Phil Sheridan was also the sire of the great mare Phyllis, with a record of 2:15%, and 113 heats in 2:30 or better to her credit. Phil Sheridan now has ten performers in the 2:30 class, and with two such mares as Adelaide and Phyllis among them, his right to honor and fame is well established. Young Columbus has eleven such performers, and four sons who have produced one or more, and his daughters have produced eight, among them Abbottford 2:19%. When it is remembered that Young Columbus and Phil Sheridan stood in Northern New York and did not have the benefit of first class mares, one cannot avoid the conclusion that they were horses of the very highest merit. You might expect the family to be wanting in game and staying qualities, but Adelaide and Phyllis, and others of the family, furnish conclusive evidence to the contrary.

It is not more than probable that Old Columbus, and Pacing Pilot, the sire of Pilot Jr., were of the same origin, and should not the ancestry of these Montreal or St. Lawrence river pacers be more fully investigated?

Nuttingham is a beautiful chestnut in color, without a suggestion of the sorrel, and it is doubtful whether the most critical judge could find a weak spot in his conformation. With rare intelligence and pure trotting action, he gives promise of a great future. —*Wallace's Monthly*.

Nuttingham, the colt above referred to is owned by Capt. William Willets, of Pontiac, Mich., and it is expected that he will make the season of 1887 in that city. Nutwood, the sire of this colt, stands for \$250, and was got by Belmont, (a noted son of Alexander's Abdallah), and his dam was Miss Russell, the daughter of Pilot Jr., distinguished for being the dam of Maud S. 2:08%.

THE CHICAGO MEETING.

The racing at Washington Park, Chicago, which opened July 3d, was of a high order. The horses comprised a number of the best now on the turf, and the events were generally of great interest. The American Derby had ten starters, namely, Ben Ali, Preciosa, Blue Wing, The Bourbon, Sir Joseph, Silver Cloud, Lijero, Ed. Corrigan, The Duke, and Lewis Clark. Ben Ali was the favorite, his victory in the Kentucky Derby giving him the call, while Blue Wing was fancied by a strong party. The result was a great surprise, Silver Cloud winning by three lengths after a sharp contest, Blue Wing second, and Ben Ali in the mob. The race, a mile and a half, was run in 2:37%, the first mile in 1:45. Silver Cloud was bred in California, sired by Grinstead, and was bred by Monarchist, and is owned by E. J. Baldwin, of California. On

the second day Jim Douglass, by Wildside, won a mile and a sixteenth dash in 1:47%, beating all previous records by a second and a quarter. On the 6th, in a mile and a half race, Baldwin's Volante, by Grinstead, dam Sister Anne, won in the excellent time of 2:36%, the first mile being run in 1:42%. The winner carried 118 lbs., top weight, and won easily. The Sheridan stakes was another surprise. Silver Cloud, after winning the Derby, was a strong favorite. The starters were Ed. Corrigan, Jim Gray, Silver Cloud, Kalahoo and Pure Rye. Ed. Corrigan was virtually without backers, but he won an exciting race in good time. The race was a mile and a quarter, and was run in 2:10, the first mile in 1:43. Silver Cloud never had a chance of winning, and finished third. Corrigan is owned by R. P. Ashe. The other races were also sharply contested, and as the attendance was large and the course in good condition, the meeting has been a decided success.

Horse Gossip.

JEROME TURNER is not doing as well as expected this season, and has disappointed those who backed him.

"LUCKY" Baldwin expresses a desire to match Volante at a mile and a half against any horse in the country, for \$25,000 a side.

THOROUADOUR, the great four-year-old, beat that great mare Miss Woodford, last week, in a mile and a quarter race. The time was 2:09%.

JOHNSTON, the pacer, had a matched race with Mike Wilkes on July 5th, at Minneapolis, Minn., for six thousand dollars, and won as he pleased. Time, 2:15%; 2:18%, 2:21.

MAGNA CHARTA's mares are regarded as about the correct thing to breed to Hambletonian stallions in Branch County, and they are in request at good prices for that purpose.

THE FASTEST running mile made this season so far was by the three-year-old Ada D., who last week ran a mile in 1:41%, carrying one pound over weight. She is a daughter of Encquirer and Mariposa.

THE London Sporting Life, in giving its opinion of race-horses, says the best stayer is Priaun, the best miler Bay Middleton, and possibly the best mares ever seen were Queen of Trumps, Beeswing and Crucifix.

TREMONT, the great son of Virgil, is undoubtedly the greatest two-year-old of the year. He has won ten races without a skip, and carried off \$23,110 in stakes. He is owned by the Dwyer Brothers, of Brooklyn, N. Y.

THE preparations for the summer meeting of the Detroit Driving Club give promise of a successful meeting. The meeting opens July 20, and closes July 23. The list of entries comprise some of the finest trotters in the country.

THE trotting mare Blue Belle, 2:24%, has been sold for \$5,000 to Wm. Moesinger, of Frankfort, Germany, and is by this time on her way to join the large colony of American trotters in Europe, there being now about 15 mares, with records ranging from 2:17% to 2:30, on the other side of the water.

THE Pontiac Gazette is authority for the statement that Mr. H. Skidmore has in the fair ground stable at that place, a trotting horse that is said to be the largest in the world, being 18 hands high. He was sired by a Mambrino Patchen, from a Clay dam; he has shown a 2:40 gait. There is a record of 18 hands, but he was not a trotting horse. It is probable the Skidmore horse has been fed on Homestead superphosphate, or some such stimulant, to cause such a growth.

The Farm.**Growing Wheat Cheaply.**

A correspondent of the Philadelphia Press thus treats the above subject:

"The example of English farmers who till much dearer lands than any used for farming purposes in this country should be greatly encouraging to us. For many years the average wheat crop of England has been twenty-eight or twenty-nine bushels per acre. When it falls below this yield the crop is reckoned a failure. Several bad seasons in succession have reduced English wheat below this average, and this, quite as much as low prices, has discouraged the farmers of that country. If they should get the crop to which the fertility of their soil fairly entitles them wheat growing would be at least as profitable as any other part of farming.

As it is, England still grows an amount of wheat greater than is produced on any other equal area of land in the world. This could not be if the ordinary crop were grown at a loss.

"The danger of wheat growing in this country is that low prices will be made the excuse for poorer farming, rather than incentive to better culture and more thorough manuring. The average yield of wheat in this country is little more than eleven bushels per acre, or considerably less than half that of English farmers. This yield is already too small to bear decreasing. There is no possible hope that prices of wheat will advance sufficiently to make poor crops pay. While the great bulk of our wheat is sold at a loss, the main exceptions are where crops considerably above the average are obtained. Such crops are grown on new virgin lands, and also experienced and careful wheat growers who have built up their farms by a system of manuring and underdraining.

The first method of wheat growing is necessarily temporary, but the farmer who on long cultivated fields is able to grow crops of wheat twenty-five to thirty-five or forty bushels per acre has to a great extent made himself independent of prices. Not even the Indian peasant working for eight or ten cents per day can compete with him for the Indian farmer is poor, the crop small per acre, and of inferior quality.

"One of the means for growing wheat cheaply is by growing it in connection with other crops. I live in a section where up to thirty or forty years ago wheat was grown almost exclusively. Failure of wheat compelled a change to a mixed system of farming. Into this wheat has entered the pony breed of cattle in England, but they are not heavy enough for beef making. We want something that will make rumps and roasts more rapidly, like the Shorthorn, Hereford and Polled Angus.

fore eight or ten years ago. The use of commercial fertilizers and of harvesting machines enables them to do this. A wheat crop is the almost universal preliminary to seeding down a field. The crop sown the previous fall is out of the way until the harvest. If we had our wheat crop alone to depend on not a bushel would we sell at present prices. But we sell corn, oats, barley, potatoes, fruit and other minor farm products, and can grow all of these just as well or perhaps a little better for having to sow some wheat. It gives employment to men and teams when they would otherwise have no paying work to do. A few acres of wheat sown the fall before leaves the farmer more time to care for the remainder of the farm and make it all productive. Hence, while wheat alone could not be made to pay at present prices, it is the one crop in all our system of mixed husbandry which most farmers could least afford to spare."

The Sheep Gad-Fly.

STEPHEN POWERS, in the *Country Gentleman*, says in reference to this annoyance to sheep:

These flies prevail worst near or in a forest, or on lowlands, about moist pastures, swamps, &c. Notwithstanding they are thickset in the woods, the sheep congregate there for the sake of the shade. And they find, also, in the woods a means of self protection against their enemy—that is, the dust. Every sheep is observed to have its stamping ground—little basin stamped out at the foot of a tree, or beside a log, or deep within the recesses of a fallen tree-top—where it lies down and gets up, turns around, and lies down again a score of times in a day. Sometimes it will lie here a long time, with its nose outstretched close to the ground, inhaling the dust. I consider this natural dust-bath a great protection against the gad-fly, and almost as necessary to the sheep's best welfare as it is to the hen's. It not only wards off the fly, but the foot-rot as well.

The next best thing is an open shed, to which the sheep can resort during the heat of the day. This should be dark and cool, to make it attractive. The sheep soon learn that a room of this sort is almost exempt from the visitations of their enemy, and they will travel a considerable distance for the privilege of passing the day under its shelter.

But after all has been done and provided, there is a margin of danger toward the close of the afternoon. The sheep get hungry during the long, hot day, and they venture forth before sunset, at the very time when the fly is probably the most active of the whole day. Now it is that the mischief is done; the egg is laid in the nostril.

After the grub has effected a lodgment in the nasal sinuses, I have always found it unsatisfactory to attempt to dislodge it. The mucous membrane lining these cavities is so sensitive—a fact attested by the suffering and death of the animal from a cause apparently so trivial, often concluding the judgment of the farmer as to the real nature of the ailment)—as to make it dangerous to bring in contact with it anything strong enough to kill or loosen the grub. An injection of turpentine is the best thing, both as a remedy and as a preventive, though, as I said above, no remedy can be depended on as certain. I have found it well worth while to go over the entire flock of lambs twice during the season, as a preventive measure, and at weaning, and again about October 15. For this purpose a common *bait* syringe, to be had at the drug store, is used.

Let the operator take the lamb between his legs, standing up naturally, charge the syringe with a mixture of equal parts of turpentine and linseed oil, introduce the nozzle carefully the whole length of the nasal passage (in a grown sheep this is nearly or quite six inches long), and then with a quick spurt inject about a tea-spoonful. Let the lamb have its head until it recovers from the shock; then treat the other nostril the same way.

Handing and Judging Cattle.

THE New England Farmer says that at the Norwalk Farmers' meeting, Prof. Brown, of Canada, gave a "barn floor lecture," reported as follows: A cow and a pair of oxen were brought into a ring, and while the Professor handled the animals over, he talked to his audience as to a class of students at school. The cow looked like a Jersey, and the Professor stated that it is impossible to determine with certainty by the looks of an animal whether it is a full blood or a grade. A record only can determine that point. The color of an animal is a matter purely of fancy. The color does not determine the intrinsic worth of an animal so far as related to its feeding or productive capacity, nor is there the difference in breeds that many suppose. A healthy animal will lay on flesh or fat according to the amount of food consumed, but some breeds lay the flesh upon one part of the body and some to other parts, and some have a good deal more frame to build upon than others. Of course those animals are most desirable as feeders that can lay on the flesh and fat where it will be worth the most money per pound in market. In selecting a dairy cow he likes a long face, especially from the eye downward, also a wide nostril. He likes a cow with a face that will hold water when brought to a horizontal position, but would avoid a dished face on a bull. He likes a flatish or oval horn rather than a round one, but likes fat better to see no horns at all. Horns are not needed on cattle kept in domestication. We do not want our animals to fight each other. A cow's neck should be lady-like, not heavy and masculine. The idea of a general purpose cow is in a measure absurd, yet there is something in it. The fore-quarters should be deep rather than wide, and the neck should fall from the shoulders forward, giving what is termed a ewe neck. Then there should be lots of room for the food, a good large barrel. A quiet eye betokens a quiet feeder that will use its feed to a good purpose. A thin, delicate skin is not as desirable as a thicker one with a mellow feeling beneath it. Fine, curly hair is better than a coarse coat, and if the hair is inclined to curl, all the better. He had a good word for the Devons as being well adapted to a hilly pastures, and for working cattle. They had been called the pony breed of cattle in England, but they are not heavy enough for beef making. We want something that will make rumps and roasts more rapidly, like the Shorthorn, Hereford and Polled Angus.

THE Racine Agriculturist makes the following suggestion in regard to feeding grain to fowls: Do not fail to plow the fowl runs after a shower, and seed them bountifully with corn and oats. The sweepings from the barn floor that contain timothy may be added to the morning cut. The only philosophy that applies to it is that clover absorbs a large amount of dew aside from its own sap, and there is a double amount of moisture to dry out. In the afternoon this surplus is well evaporated, and when it is cut, even if coated with falling dew, it has no power to absorb.

THE above is a fair representation of the fowls known as Dimon Creepers, originated by Mr. John Dimon, of Windsor, Ont. They are hawk or Dominique in color, with very short yellow legs, heavy compact bodies, and about the size of Plymouth Rocks. Mr. Dimon's idea in breeding them was to produce a good table fowl, hardy enough to withstand northern winters, good layers, quiet and easily handled, with legs so short that they are practically unable to scratch. He says they can be allowed full liberty in the garden, to its benefit as well as of the fowls. They can be fenced in as easily as geese, as they are not flyers, and have very quiet dispositions.

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GRAVEL serves the same purpose with birds that teeth do with quadrupeds. The grinding in the gizzard may be heard by placing the ear near the fowls when their stomachs are full and digestion is taking place. The sound of the gravel stones grinding and rubbing against the grain is especially audible in the case of ducks that are about half grown, at which time they are increasing in size very fast, and digestion proceeds very rapidly.

BEETS should be gathered before freezing weather, as the tops are a good green fodder for cattle, but are

Horticultural.**CULTIVATION OF NUT-BEARING TREES.**

By W. A. SMITH, OF BENTON HARBOR.

Paper read at the late meeting of the West Michigan Fruit-Growers' Society.]

In every well timbered country there are short distinct and well defined periods or epochs. The first period furnishes the conditions for a wild or savage state of mankind, and during its continuance, nature provides in great measure for the simple wants of her children. When the supply in one locality becomes exhausted they need only migrate to other and more favorable locations, like the birds of the air and the fish of the sea. By and bye the pioneer comes along. The country is wild, the land is cleared in its primeval forests, the sound of the woodman's ax has not been heard to echo among these stately trees. The timber which has been growing and decaying upon the virgin soil for hundreds, thousands—yes perhaps millions—of years is in the way of human progress and must at least in part be removed. The land must be tilled in order that man may rely upon his own energy and resources for the necessities of life.

In a new country, before railroads are constructed, and not being favored with water transportation, timber is of little or no value save for fuel and the rude cabins of the first settlers. Hence, in days not long past, the logging bee was a common frolic. The timber was burned upon the ground where it grew, and the ashes added additional fertility to the soil already enriched by the decomposition of vegetable matter for unknown ages.

The second epoch is the period of commercial activity in the lumber regions. Sawmills are erected at all convenient points, and there is logging in the winter, running logs in the spring, and a general activity in the lumber business the balance of the year.

In our own Peninsular State this system is entirely and systematically in vogue even now.

Those of us who came to Michigan not more than a quarter of a century ago remember well the majestic and magnificent stretches of forest over much of her rich domain. In 1836, fifty years ago, Michigan entered upon her career as a State. Then was one of the best, if not the best, timbered state in the Union. Her timber, even to the present time, has been a source of manifold wealth to her citizens. The laborer has his wages, the capitalist his large percentage of the money invested. The tax has been applied to her forests with a ruthless and savage hand. "To-day is the day of our need," says the lumberman. "Let to-morrow take care of itself," and how swiftly and how thoroughly has he accomplished his work! Fifty years, a mere point in the cycle of time—only a day, as it were, in the age of a State—and yet we are brought face to face with one of the most important problems of agriculture and prosperous statehood, viz.: How can we best protect and preserve our remaining timber? Already our climatic changes have been mainly for the worse—summers hotter, winters colder, droughts and floods more frequent and destructive. To-day the remaining pine timber of the State is mainly in the hands of capitalists who will, in the next twelve or fifteen years, see up about all the valuable pine, at least in the southern peninsula. In 1900, after five years of statehood, will be stripped from Michigan almost entirely her great pine forests, and about another quarter of a century thereafter her hardwood timber will likewise be used up. This estimate is upon the present basis of consumption, which is likely to continue.

As a people, we shrink from and abhor too much government, hence we will be slow to adopt (if indeed we ever do) the European system of forestry. There the governments own large tracts of timber lands, and has reduced forestry to a fixed and well defined science. In some of those countries even private timber claims are placed under governmental control, and thus instead of waste, depletion, and destruction of timber for immediate gain, their forests are made to yield them a perpetual revenue which is yearly becoming more valuable. Instead of using up the principal, the interest is accumulating new principal.

In this country, without a radical change in our national and State laws, in our system of growth and culture, little can be hoped for in the future. Sooner or later our national and State governments will, by force of circumstances, be compelled to adopt a radical system of forestry. For the present our timber preserves and culture will be mainly in the hands of individual owners of the soil. Singly we can do little, collectively we can do much. Landed proprietors will soon learn that growing timber can be made as profitable as growing grain and fruit; and when they once plainly see the everlasting dollar the problem will be solved.

As a people we invest millions, sometimes, in rotten life insurance companies, for the benefit of our families when we are laid away. This shows a disposition on our part to leave that portion of mankind in better circumstances for our going. If we would pursue a like policy in timber culture we might not only leave our families in better circumstances but make the world more prosperous and happy, and the earth more beautiful and homelike.

But men must sow to-day and reap tomorrow, and the idea of deferred profits for one, two, three, or more generations is a stumbling block to too many. On this point we do not act like wise, rational beings. He who lives for the present alone, without regard to the welfare of the future, is at enmity to the best interests of mankind. But we overlook the fact that timber culture can be made a sure and safe investment in a much shorter period of time than is usually reckoned upon. Many varieties of forest timber grow rapidly, and in one or two decades are available for various purposes. While growing they make wind-breaks, shelter crops and stock, equalize moisture, and beautify the earth. For the best interests of agriculture and every interest dependent upon that, about one-fourth of the land should remain permanently in timber.

Every man or woman who owns a country homestead should see to it that a part of said homestead be well stocked with valuable timber. Among the trees should be a liberal

supply of nut-bearing trees. The walnut will grow on any soil that will produce good corn, and even on soil that will not grow good corn; for its native habitat is rocky, hilly, and mountainous land. Yet it will readily adapt itself to any soil and locality suitable for farming purposes, and prove fruitful. This and the black chestnut are the delight of the small boy in the fall of the year. Then why not grow them? They soon come into bearing and will continue to bear bountiful crops of wholesome and delicious nuts for many generations of boys in the dim future. These trees, too, are ornamental and useful for many other purposes. The black walnut is to-day the most valuable timber tree in this latitude. I would now rather have a thrifty, growing, young black walnut orchard than an apple orchard of equal extent, and of the most approved varieties. Within the last thirty years I have seen large, stately black walnut trees felled and split into common rails for fencing purposes, which, if they were standing to-day and sound, would be worth more per tree than an acre of the best improved land upon which they grew. The black walnut in its native state is not only a good tree, but always indicates a good soil. This fact should be remembered in growing this tree.

In timber culture due regard should be had for the different varieties of timber and their adaptability to particular kinds of soil, also the various periods of maturity of the various species. This knowledge will enable us to grow different varieties upon the same tract of land to the best advantage. For 200 years France has had her forestry laws for the protection and culture of timber. In Germany the forestry and timber culture laws date still further back, under which a system of forestry schools has been established, which for thoroughness and system in every detail connected with the growth of timber is superior to that of any other country.

In many of the European countries much of the timber land is owned and under the direct control of the governments. The forests are divided and subdivided, as cities into wards and precincts. The police force, not being influenced by ballots from the people, are expected to do impartial justice to all. When the age of greatest usefulness of the various timber has arrived, it is removed and room is made for a new crop. In this way they have succeeded in growing not only three times as much timber per acre as the unaided forest produces, but timber of superior quality. They thus make their forests pay a revenue, besides beautifying and adorning the country. We can hardly imagine anything in nature more lovely and inviting than a clean, well kept forest. The various periods of maturity or greatest usefulness is found to be as follows: in their latitude and under good management: Birch and birch, 50 to 60 years; locust and maritime pine, 60 to 70 years; Scotch pine, 50 to 60; beech, 80 to 140; ash, 90 to 100; chestnut, 90 to 120; spruce, 90 to 140, fir, 100 to 140; elm, 100 to 140, oak, 100 to 200. Our black walnut will probably require nearly the same time as chestnut.

For roadside planting the rock maple is perhaps one of the most desirable trees we have—easy to propagate, a free grower, and cleanly in all seasons. To give the best satisfaction it should be transplanted into nursery grounds a year or two before being permanently transplanted. This tree when old enough will furnish refreshing shade in summer, a delicious sweet in spring, and a valuable wood for manufacturing purposes. I cannot help noting here the great service rendered the cause of timber culture in this and other States by that indefatigable worker, C. W. Garfield, in the last report of the State Horticultural Society. The collations, reports, opinions, experiments, therein set forth and given to the world, although in fragmentary form, by Mr. Garfield, should entitle him to the gratitude of every well-informed member of the human race.

Let us see to it that we do something, individually and collectively, to rehabilitate our beautiful State, in part, with timber-belts, wind-breaks, and shade tree for many beasts and birds.

If we set but one tree individually, somebody will rise up and call us blessed.

PEACH GROWING IN MICHIGAN.

At the recent meeting of the Western Michigan Fruit-Growers' Society Mr. A. S. Dyckman read a paper on this subject, in which estimates of the fruit grown in the State were given. Mr. Dyckman is one of the oldest and most successful peach-growers in the State, and his statements upon the subject are entitled to great weight. In the discussion which followed the reading of the paper, Mr. Harrison Hutchins, of Ganges, said that his neighborhood included Douglas, Fennville, and Saugatuck, and in it were not less than 250,000 peach trees. Mr. J. F. Barron, of Fennville said that from 35,000 bearing trees in that vicinity 234,000 baskets were shipped four years ago, since when there had not been a full crop. Mr. Hamilton thought Mr. Dyckman had placed the estimate nearly right at one basket per tree of all ages, bearing and otherwise. J. G. Ramsell, of Traverse City, thought the estimate too low. If it is not, we must be more careful in our investments. G. W. Griffin said there were in Casco township five or six hundred acres of trees three years old or more, containing 70,000 trees; and there are 35,000 unbearing trees. Mr. Hutchins would quit the business if he thought the product only one basket per tree. Mr. Dyckman reminded that the estimate included all trees, young and old, in all stages of growth. You will often find in moist, warm weather, decaying specimens. These should be removed at once, that the infection may not spread. In cutting out the interfering boughs do not take off the sharp-pointed spurs which are forming along the branches, for these are maturing the fruit-buds. Mr. Force recommends the following ten varieties, named in the order of ripening: Canada; Orleans, a red-checked plum; McLaughlin, greenish, with pink cheek; Bradshaw, large red, with blue bloom; Smith's Orleans, purple; Green Gage; Bleeker's Gage, golden yellow; Pippin; D'Agen, purple; Coe's Golden Drop; and Shropshire Damson for preserves.

My Way for Watermelons.
Contrary to the experience of many growers I have found that the richer the soil, provided it be warm and light, the surer the success. The ground should be broken quite deep and thoroughly pulverized. I prefer marking both ways; the plants can be cultivated better. Two shovelfuls of good manure should be put in each cross. The best I have ever used was well rotted leaf mould and stable manure in alternate layers of equal proportion; this well rotted and turned over until thoroughly mixed. This will not rush the plant while young so much as all stable manure, but it will bring more and larger fruit. This can be mixed with

the soil in the hill or not; I so mix, but do not say it is best. Make good-sized hills, not too high, and drop at least a dozen seeds in each. This is important, for two reasons: So many plants aid each other in raising the soil (which is so apt to become crusted on top) and they come up better; some seed give stronger plants than others and will bear better fruit; planting so many in the hill we are more apt to get strong plants; these can be selected after the plants are up, leaving two in a hill.

As soon as plants are up hoe, or if a small patch, loosening the soil with the fingers is better; the young plant is not so apt to be disturbed, which it should not be. I like deep cultivation for the first three times; then shallow until finished. Melons should be cultivated every week until the vines interfere. I plow the ground thoroughly between the rows each plowing. As to the "melon bug" the best remedy is to sift ashes or soot on the plants as soon as they are discovered to be infested; then hunt them while the dew is on the vines or while it is cool. They are then easier caught. I have tried kerosene, tobacco stems and tobacco juice, saltpetre, wheat bran—but none paid the trouble. As to pinching the vines I doubt if it pays; I could see no advantage; there may be a small percent more melons on the average they are smaller.

After the melons are raised there is much in picking at the right time to make them most profitable. I have heard farmers say they never pulled a ripe melon; they could not tell when the melon was ripe. The rind of melon left on the vine generally becomes hard and the pulp brittle. If left until properly matured the part in contact with the ground will be changed from a white to a pale yellow and upon close examination numerous small pimples somewhat like the measles will be noticed on the surface, particularly on the outer edge. With these signs, if the melon be gently pressed and it cracks inside it may be regarded as ripe. The top side of a melon when ripe is of a dull, lifeless brown color. Against melon vines place a glass lantern on a box in the middle of the patch. They like darkness rather than light, because their deeds are evil.—*N. Y. Tribune.*

How to Prune the Currant and Gooseberry.

A correspondent of the *New England Farmer* thus describes the methods of a New York plum grower who has been very successful with this fruit:

In the place of general advice in regard to this fruit I shall give the experience of T. S. Force, of Newburg, who exhibited several varieties at the last annual Orange County Fair. His plum orchard is a large poultry-yard containing half an acre, of which the ground is a good loam, resting on a heavy clay sub-soil. He bought trees but one year from the bud, set them out in autumn, and cut them back so that they began to form their head at two feet from the ground. He did not permit them to bear for the first three years.

During this period the ground about them was kept mellow by cultivation, and being rich enough to start with, received no fertilizers. It is his belief that over fertilization tends to cause the disease so well known as the black knot. During this growing and forming period Mr. Force gave careful attention to pruning. Budded trees are not even, symmetrical growers, but tend to send up a few very strong shoots that rob the rest of the tree of sustenance. Of course these must be cut well back. It is far better, however, not to let these rampant shoots grow to maturity, but pinch them back in early summer, thus causing them to throw out side branches. By summer pinching and rubbing off tender shoots a tree can be made to grow in any shape we desire.

When the trees receive no summer pruning, Mr. Force advises that the branches be shortened in at least one-half in the spring, while some shoots are cut back even more rigorously. At the age of four or five years, according to the vigor of the trees, he permits them to bear. Now cultivation ceases, and the ground is left to grow hard, but not weedy or grassy, beneath the boughs. Every spring, just as the blossoms are falling, he spreads evenly under the branches four quarts of salt. While the trees thrive and grow fruitful with this fertilizer, the currulo, or plum weevil, does not appear to find it at all to his taste. His remedy for the black knot is to cut off and burn the small boughs and twigs affected. If the disease appears in the side of a limb or in the stem, he cuts out all trace of it, and paints the wound with a wash of gum shellac and alcohol.

Trees load so heavily that the plums rest against one another. You will often find in moist, warm weather, decaying specimens. These should be removed at once, that the infection may not spread. In cutting out the interfering boughs do not take off the sharp-pointed spurs which are forming along the branches, for these are maturing the fruit-buds. During this growing and forming period Mr. Force gives careful attention to pruning. Budded trees are not even, symmetrical growers, but tend to send up a few very strong shoots that rob the rest of the tree of sustenance. Of course these must be cut well back. It is far better, however, not to let these rampant shoots grow to maturity, but pinch them back in early summer, thus causing them to throw out side branches. By summer pinching and rubbing off tender shoots a tree can be made to grow in any shape we desire.

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POISONS FOR DESTRUCTIVE INSECTS.
Prof. S. A. Forbes, of Champaign, reported to the Illinois Horticultural Society a series of his experiments in the use of poisons on the codling moth and the currulo, which the

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After the melons are raised there is much in picking at the right time to make them most profitable. I have heard farmers say they never pulled a ripe melon; they could not tell when the melon was ripe. The rind of melon left on the vine generally becomes hard and the pulp brittle. If left until properly matured the part in contact with the ground will be changed from a white to a pale yellow and upon close examination numerous small pimples somewhat like the measles will be noticed on the surface, particularly on the outer edge. With these signs, if the melon be gently pressed and it cracks inside it may be regarded as ripe. The top side of a melon when ripe is of a dull, lifeless brown color. Against melon vines place a glass lantern on a box in the middle of the patch. They like darkness rather than light, because their deeds are evil.—*N. Y. Tribune.*

How to Prune the Currant and Gooseberry.

A correspondent of the *New England Farmer* thus describes the methods of a New York plum grower who has been very successful with this fruit:

In the place of general advice in regard to this fruit I shall give the experience of T. S. Force, of Newburg, who exhibited several varieties at the last annual Orange County Fair. His plum orchard is a large poultry-yard containing half an acre, of which the ground is a good loam, resting on a heavy clay sub-soil. He bought trees but one year from the bud, set them out in autumn, and cut them back so that they began to form their head at two feet from the ground. He did not permit them to bear for the first three years.

During this period the ground about them was kept mellow by cultivation, and being rich enough to start with, received no fertilizers. It is his belief that over fertilization tends to cause the disease so well known as the black knot. During this growing and forming period Mr. Force gave careful attention to pruning. Budded trees are not even, symmetrical growers, but tend to send up a few very strong shoots that rob the rest of the tree of sustenance. Of course these must be cut well back. It is far better, however, not to let these rampant shoots grow to maturity, but pinch them back in early summer, thus causing them to throw out side branches. By summer pinching and rubbing off tender shoots a tree can be made to grow in any shape we desire.

When the trees receive no summer pruning, Mr. Force advises that the branches be shortened in at least one-half in the spring, while some shoots are cut back even more rigorously. At the age of four or five years, according to the vigor of the trees, he permits them to bear. Now cultivation ceases, and the ground is left to grow hard, but not weedy or grassy, beneath the boughs. Every spring, just as the blossoms are falling, he spreads evenly under the branches four quarts of salt. While the trees thrive and grow fruitful with this fertilizer, the currulo, or plum weevil, does not appear to find it at all to his taste. His remedy for the black knot is to cut off and burn the small boughs and twigs affected. If the disease appears in the side of a limb or in the stem, he cuts out all trace of it, and paints the wound with a wash of gum shellac and alcohol.

Trees load so heavily that the plums rest against one another. You will often find in moist, warm weather, decaying specimens. These should be removed at once, that the infection may not spread. In cutting out the interfering boughs do not take off the sharp-pointed spurs which are forming along the branches, for these are maturing the fruit-buds. During this growing and forming period Mr. Force gives careful attention to pruning. Budded trees are not even, symmetrical growers, but tend to send up a few very strong shoots that rob the rest of the tree of sustenance. Of course these must be cut well back. It is far better, however, not to let these rampant shoots grow to maturity, but pinch them back in early summer, thus causing them to throw out side branches. By summer pinching and rubbing off tender shoots a tree can be made to grow in any shape we desire.

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MICHIGAN FARMER,

— AND —
STATE JOURNAL OF AGRICULTURE.

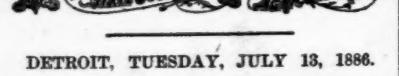
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DETROIT, TUESDAY, JULY 13, 1886.

This Paper is Entered at the Detroit Post-office as second class matter.

WHEAT.

The receipts of wheat in this market the past week amounted to 56,460 bu., against 47,500 bu., the previous week and 56,452 bu. for corresponding week in 1885. Shipments for the week were 139,121 bu. against 127,277 the previous week, and 118,230 bu. the corresponding week in 1885. The stocks of wheat now held in this city amount to 379,693 bu., against 523,851 last week and 419,869 bu. at the corresponding date in 1885. The visible supply of this grain on July 3 was 28,195,380 bu. against 29,483,665 the previous week, and 37,370,024 bu. at corresponding date in 1885. This shows a decrease from the amount reported the previous week of 1,288,285 bu. The export clearances for Europe for the week ending July 3 were 1,630,341 bu. against 1,591,758 the previous week, and for the last eight weeks they were 13,440,986 bu. against 4,819,837 for the corresponding eight weeks in 1885.

The market was an exciting one the past week, with business largely of a speculative character, and confined mostly to futures. On Wednesday there was a sharp flurry in all domestic markets, Chicago leading off, and values advanced 2@3c. But the advance was wholly lost before the close on Saturday, except on late futures, which closed steady and somewhat higher than a week ago. The market yesterday opened firm, advanced 1@2c under reports of continued damage to spring wheat crop, spot being the firmest. The statement of the "visible supply" showed a small increase, and the market weakened. Later it turned up, and closed finally only slightly below highest prices of the day. Chicago was active, with rapid fluctuations, finally closing at an advance from Saturday's prices. New York opened higher, advanced about a cent above opening prices, fell back again, and closed about 3/4c higher than on Saturday. Liverpool was quoted firm, with demand improving.

The following table exhibits the daily closing prices of spot wheat from June 21st to July 12th, inclusive:

	No. 1 White.	No. 2 Red.	No. 3 Red.
June 21	80%	81%	82%
22	80%	79%	75%
23	80%	81%	81%
24	80%	80%	75%
25	81%	80%	75%
26	82%	81%	75%
27	82%	81%	75%
28	82%	81%	75%
29	82%	81%	75%
July 1	81%	80%	76%
2	81%	80%	76%
3	81%	80%	76%
4	82%	81%	76%
5	82%	81%	76%
6	82%	81%	76%
7	84%	..	..
8	85%	..	..
9	85%	..	..
10	85%	84%	..
11	84%	..	..
12	84%	83%	..

In future business was very active, but dealings were largely confined to No. 2 red. The following table gives the closing prices each day of the past week on the various deals of No. 1 white:

	July.	Aug.	Sept.
Tuesday	86%	..	..
Wednesday	86%	..	..
Thursday	..	..	..
Friday	..	..	..
Saturday	88%	81%	..
Monday	88%	..	..

For No. 2 red the closing prices on the various deals each day of the past week were as follows:

	July.	Aug.	Sept.
Tuesday	81%	81%	83%
Wednesday	84%	84%	84%
Thursday	82%	81%	82%
Friday	81%	82%	82%
Saturday	80%	82%	82%
Monday	88%	83%	..

The rapid fluctuations in values mark the peculiar position of the market. Despite the utmost endeavor of the "bear" element, the knowledge of the condition of the crop and the rapid decrease in the "visible supply" have combined to strengthen the views of holders. In this condition of affairs sharp speculators are able to frighten the "shorts" by inflated stories of damage done the crop, and they rush into the market to buy, only to find that when they have loaded up values have fallen back to about their former level. It is a condition of affairs that farmers should not interfere with. Let the two parties interested fight it out, farmers merely watching the progress of the battle to take advantage of a good time to put their crop in market.

The crop of the State will be two-thirds harvested this week, and, from best information obtainable, the yield will probably be about 25,000,000 bushels, as compared with about 30,000,000 a year ago. Most estimates make the crop of the State 25,000,000 bu., but that is certainly too high.

From other States advices show a falling off in condition as compared with early estimates. The difference in this respect is most noticeable in Kansas, California, and Michigan; but not a single State has come up to the early promise of the crop. In the spring wheat States the drouth of the past four weeks has reduced the estimates from 145,000,000 bu. to 125,000,000, with the outlook favoring a further reduction, as the drouth is still unbroken in a large portion of the spring wheat belt.

The receipts of home and foreign grown wheat in the United Kingdom for the week ending July 3 were 400,000 to 550,000 bushels less than the estimated consumption. For the eight weeks previous it was 70,991 quarters (8 bu. to the quarter, more than the estimated consumption).

Quotations at Liverpool yesterday for American wheat were as follows, per cental:

Winter, 6s. 6d. @ 6s. 8d.; spring, 6s. 4d. @ 6s. 6d.; California, No. 1, 6s. 6d. @ 6s. 7d. Market improving.

The following table shows the amount of wheat in sight, including the visible supply in the U. S. and Canada, and the amount on passage for the United Kingdom and the continent of Europe, on the date named, as compared with the same date last season:

	Bushels.
Visible supply	29,483,665
On passage for United Kingdom	18,704,000
On passage for Continent of Europe	5,828,003
Total bushels June 29	53,515,665
Total previous week	56,608,196
Total two weeks ago	59,635,665
Total June 27, 1885	59,635,665

CORN AND OATS.

CORN.

The receipts of corn in this market the past week were 10,075 bu., against 14,569 bu. for the corresponding week in 1885. The visible supply of corn in the country on July 3 amounted to 9,188,857 bu. against 9,458,143 bu. the previous week, and 7,351,916 bu. at the same date last year. The visible supply shows a decrease during the week of 269,286 bu. The exports for Europe the past week were 852,567 bu., against 1,161,266 bu. the previous week, and for the past eight weeks 8,133,001 bu., against 6,740,257 bu. for the corresponding period in 1885. The market closed easy but with the advance sustained. Quotations here are 33/4c per bu. for No. 2, and 33c for No. 3. A sale of No. 3 yellow was reported at 33/4c. The Chicago market has also advanced, the exciting cause being the want of rain and the backward condition of the crop throughout the northwest. No. 2 is quoted there at 36/4c@36c for spot, 36c for July delivery, 37c for August, and 38c for September. The Toledo market is dull with spot No. 2 at 38c, and July deliveries at same figure. The crop in this State needs rain badly. At New York the week closed with both spot and futures active, firm and higher than a week ago. The Liverpool market is reported easy but lower, with fair demand, and new mixed western quoted at 4s. 1d. per cental for spot, 4s. for July delivery, 4s. 1d. for August, and 4s. 1d. for September.

OATS.

The receipts of oatmeal in this market the past week amounted to 56,460 bu., against 47,500 bu., the previous week and 56,452 bu. for corresponding week in 1885. Shipments for the week were 139,121 bu. against 127,277 the previous week, and 118,230 bu. the corresponding week in 1885. The stocks of oatmeal now held in this city amount to 379,693 bu., against 523,851 last week and 419,869 bu. at the corresponding date in 1885. The visible supply of this grain on July 3 was 28,195,380 bu. against 29,483,665 the previous week, and 37,370,024 bu. at corresponding date in 1885. This shows a decrease from the amount reported the previous week of 1,288,285 bu. The export clearances for Europe for the week ending July 3 were 1,630,341 bu. against 1,591,758 the previous week, and for the last eight weeks they were 13,440,986 bu. against 4,819,837 for the corresponding eight weeks in 1885.

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There is positively a "boom" in hops. Of course every one knew it would come some time, but it was hardly expected this year. Most growers in this State have quit the business. So have many in Wisconsin. Then lice and honey-dew attacked the yards in the New York district, and behold the "boom" is upon us. Those who would be willing ten days ago to take 10 or 12c for their hops, now are offered 20@22c. Only one-fourth of a crop is looked for by New York growers, as the appearance of these pests at this time of the year is always fatal to the hop. The N. Y. Daily Bulletin said:

"Pretty much all the fancy stock appeared to be under engagement and taken, leaving the few buyers who remained on the lookout for stock only the tubings and late arrivals to examine, and, while these contained some very excellent cheese the reduced volume of demand made selling more difficult and led to occasional allowances in order to hasten negotiations and close out for the week. We make no change in quotations, but outside figures are difficult to obtain on the stock available. Still there is no evidence of real depression in tone, and, indeed, with the cable quotations at last commencing to creep up again and 7 1/2c@7c reported for the East Otto and Lime Brook factories, in the country there is an impression that an attempt to hold the market up will be made next week. On faulty cheddars were in active demand for export at 6 1/2c@7c. Full cream flats, two in a box, sold at 6s. 1/2c@7s. and Young Americans at 8c. Little, if anything, was doing in low grades. They were nominally 1@3s per lb. The market was pretty well cleaned up at the end of the week off full creams 3@5c. The New York market has also improved a little in price, but at the end of the week here were signs of weakness in the trade owing to light export demand. The Boston Commercial Bulletin says of the market for wool and woolen goods:

Poetry.

LOVE'S SEASON.

May, never ask, beloved, oh, why so late?
Nor marvel I could see yet love thee not.
Love's secrets lie within the book of fate,
Unsheathed and untaught.

The self-same star shines in its lofty sphere,
The poet sees and sees a hundred times,
Before from silvery cloud emerging clear,
The wood in deathless rhyme.

The self-same melody, unsealed, ignored,
May float for years in the composer's brain,
One day he careless strikes his harp's chord,
To find a god-like strain.

And countless suns rise o'er the Summer sea,
Before that rosy glow the painter caught,
Transferred to canvas for all time to be
The faeless dawn of thought.

So soul by soul for years may lay alone,
Ye side by side; no mortal tongue can tell
How word or smile or look doth make them one.
Therein love's miracles!

WHEN MY SHIP WENT DOWN.

Sank a palace in the sea,
When my ship went down;
Friends whose hearts were gold to me—
Gifts that ne'er again can be—
'Neath the waters brown.

There you lie, O ship, to-day,
In the sand-beat stiff and gray!
You who proudly sailed away
From the splendid town.

Now the ocean's bitter cup
Meets your trembling lip;
Now your gilded halls look up
From Disaster's grip.

Rain's nots around you weave;
But I have no time to grieve;
I will promptly, I believe,
Build another ship.

[Will Carleton.]

Miscellaneous.

THE ENGINEER'S STORY.

"This is about it," said John Scott, the engineer, as the train slowly crested a long, gradual grade. "You're atop of the Rocky Mountains now, ma'am."

Emily Vaughn looked to left and to right, and was conscious of a feeling of disappointment. She had pictured the top of the Rocky Mountains as something quite different from this. Here were no frowning heights or sudden gulfs, only a wide rolling plateau, some distant peaks which did not look very high, and far ahead a glimpse of lower levels running down into the plains. It seemed hardly worth while to have come so far for so little.

"Really?" she said. "But where are the mountains? They don't look nearly so high as they did yesterday!"

"Naturally, ma'am," responded the engineer; "things don't appear so high as they are. We're atop, you know."

"But there's no look-off, no wonderful distance, as from the top of Mount Washington. I confess I am disappointed."

"It's kind of queer," said John Scott, with a dry chuckle, "how folks from the East keep alluding to that 'ere little hill as if it were the standard of measurement. We don't think so much of it these days. Why, ma'am, you're about 2,000 feet higher this minute than if you was at the top of that little shack of a Mount Washington that they all think so much of."

Miss Vaughn smiled, but she experienced a shock nevertheless. The New England mind does not easily accustom itself to hearing its sacred mountain thus lightly spoken against.

"Have you ever seen Mount Washington?" she asked.

"Oh, bless you, yes!" replied John Scott, cheerfully. "I was raised over to Fryeburg and grew up alongside of it. I thought it was a pretty big concern when I was a boy, but now—he closed the sentence with a short, expressive laugh.

Miss Vaughn changed the subject. She was not offended. She had grown to like this rough, good-natured engineer in the course of the three days' journey, during which, favored as a relative of one of the directors of the road, she had several times been privileged to ride, as now, in the engineer's cab for a better view of the country.

"Have you been long on this road?" she asked.

"Pretty near ever since it opened. I run the third through train that came out of Chicago, and I haven't been off the line since, winter or summer, except for three months when I was laid up with a broken leg."

"This must look very differently in winter," said Miss Vaughn, noting the treeless distances, and the snow still glinting on the higher peaks to the left.

"You may believe it does! That first year, when the snow-sheds wasn't built, it was terrible. I was running that train that stuck in the snow seven days—perhaps you'll remember about it; it was in all the papers. I sha'n't ever forget that, not if I live to be as old as my grandfather, and he didn't die till he was ninety odd."

"Tell me about it," said Miss Vaughn, persistently, seating herself on the high side bench of the cab, with that air of attention which is so enticing to the story teller; amusements are few and far between in the long monotony of the overland journey to California; besides which, Miss Vaughn dearly loved a story.

"There ain't much to tell," said John Scott, with something perceptible in the tone of the feeling that prompted the young vocalist to complain of hoarseness. "I ain't any hand at telling things either." Then, won by Miss Vaughn's appealing eyes, he continued:

"We ran all fast and on time till we was about two hundred miles beyond Omaha. Then the snow began. It didn't seem much at first. The women folk in the train rather liked it. They all crowded to the windows to see, and the children hurried. Anything seemed a pleasant change after the sage-brush, I suppose. But as it went on coming, and the drifts grew deep, and the ears had to run slow, the older ones began to look serious, and I can tell you that we had the charge of the train felt so."

"We was just between two of the feeding stations, and we put on all the steam we could give to push through to where provisions could be got in case we had to stop. But it wasn't no use. The snow kept com-

I never see it come so. The flakes

ooked as big as saucers, and the drifts piled so quick that, when we finally stuck, in ten minutes no one could see out of the windows. The train would have been clean buried over if the brakeman and the porters hadn't gone the whole length over the roofs every half-hour, and swept it off with brooms and shovels aboard, by good luck, or nothing else could have saved us from being banked upright. But it was terrible hard work, I can tell you. There wasn't no more laughing among the passengers by the time it came to that, and the children stopped hurrahing."

"Oh, the poor little things! What did they do? Were there many on board? Was there plenty for them to eat?"

"That was the worst of it. There wasn't plenty for any one to eat. We had stuck just midway of the feeding stations, and there wasn't a good deal of anything on board besides what the passengers had in their lunch baskets. One lady had a tin of condensed milk, and they mixed that up for the babies—there was ten of them—and so they got on pretty well. But there was about five other children, not babies, but quite little, and I don't know what they would have done if it hadn't been for the young lady."

"The young lady!" said Miss Vaughn, looking up with surprise, for with the words a curious tremble had come into the engineer's voice, and a dark flush into his bronzed face.

"What young lady was that?"

It was a moment or two before John Scott answered the question.

"I don't know what she was called," he said, slowly. "I never knew. She was the only one on the train, so we just called her the young lady. She was traveling alone, but her folks had asked the conductor to look after her. She was going out to see a relative of hers—her brother, I guess, who was sick down to Sacramento. That was how she came to be there."

"Were the children under her care?"

"No ma'am; she was all alone, as I told you; but she took them under her care from the very first. They had their fathers and mothers along—three of them had at least, and the other two had their mother and a nurse girl—but somehow no one but the young lady seemed to be able to do anything with them. The poor little things was half starved, you see, and there wasn't anything to amuse 'em in the dark car, and one of them, who was sickly, fretted all day and 'most all night, and the mother didn't seem to have no faculty or no backbone to her; but whenever the young lady came round, that sick young one and all the rest would stop crying, and seem just as chipper as if it was summertime outdoors and the whole train full of candy."

"I don't see how she did it," he went on, meditatively, throwing a handful of coal in at the furnace door. "Some women is made that way, I suppose. As soon as we see how things were going, and how bad they was likely to be, that girl kind of set herself to keep along. She had a mighty gentle way with her, too. You'd never have guessed that she was so plucky. Plucky! By George, I never saw anything like her pluck."

"Was she pretty?" asked Miss Vaughn, urged by a truly feminine curiosity.

"Well, I don't know if you'd called her so or not. We didn't think how she looked after the first. She was a slender-built girl, and her face looked sort of kind and bright with her hair. Her voice was as soft—as soft as a voice can be, and it kind of sang when she felt happy. She looked you straight in the eyes when she spoke. I don't believe the worst man that ever lived could have told that girl a lie if it had been to save his life. Her hair was brown. She was different from girls in general, somehow."

"Was she pretty?" asked Miss Vaughn, urged by a truly feminine curiosity.

"Well, I don't know if you'd called her so or not. We didn't think how she looked after the first. She was a slender-built girl, and her face looked sort of kind and bright with her hair. Her voice was as soft—as soft as a voice can be, and it kind of sang when she felt happy. She looked you straight in the eyes when she spoke. I don't believe the worst man that ever lived could have told that girl a lie if it had been to save his life. Her hair was brown. She was different from girls in general, somehow."

"I think we may say that she was pretty," observed Miss Vaughn, with a little smile.

"I ain't so sure of that. There's plenty of ladies come over the road since that I suppose folks would say was better looking than she was. But I never see any face quite like hers. It was still like a lake, and you seemed to feel as if there was depths to it. And the farther you went down, the sweeter it got. She never made any rustling when she walked. She wasn't that kind."

Another pause, which Miss Vaughn was careful not to break.

"I don't know what their children would do without her," went on the engineer, as if talking to himself. Then with a sudden edge:

"I don't know what any of us would do without her. The only trouble that she couldn't be everywhere at once. There was a sick lady in the drawing-room at the end of one of the Pullmans. She had weak lungs, and was going out to California for her health. Well, the cold and snow brought on a hemorrhage. That was the second day after we was blockaded. There wasn't no doctor on board, and her husband was mighty scared. He come through to the front car to find the conductor, looking pale's a ghost. 'My wife's a-dying,' said he. 'Ain't there no medical man on the train?' And when he said no, he just gave a groan. 'Then she must die,' he said. 'Great heavens! why did I bring her on this fatal journey?'

"Perhaps the young lady'll have some remedies," suggested one of the porters; "we'll all get into the way of turning to the young lady whenever things were wrong."

"Well, I went for her, and you never see any one so level-headed as she seemed to be. She knew just what to do; and she had the right medicine in her bag; and in less than an hour that poor lady was quite comfortable, and her husband the most relieved man that ever was. Then the young lady came along to where I was standing—there wasn't nothing for me to do, but I was waiting, for I didn't know but there might be—and said she: 'Mr. Scott, I am growing anxious about the fuel. Do you think there is plenty to last? Suppose we were to be kept here for a week.'

"Now just think of it! Not one of us dumb fools had thought of that. You see we was expecting to be relieved from hour to hour, for we had telegraphed both ways, and the snow had stopped by that time, and none of us had any notion it was going to be the job it was to dig us out. Only the young lady had the sense to remember that it might take longer than we was calculating on."

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"We ran all fast and on time till we was about two hundred miles beyond Omaha. Then the snow began. It didn't seem much at first. The women folk in the train rather liked it. They all crowded to the windows to see, and the children hurried. Anything seemed a pleasant change after the sage-brush, I suppose. But as it went on coming, and the drifts grew deep, and the ears had to run slow, the older ones began to look serious, and I can tell you that we had the charge of the train felt so."

"We was just between two of the feeding stations, and we put on all the steam we could give to push through to where provisions could be got in case we had to stop. But it wasn't no use. The snow kept com-

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won't be a shovelful of coals left for any of the fires, let alone the engine.

"Then don't you think," says she, in her soft voice, "that it would be a wise plan to get all the passengers together in one car, and keep a good fire up there, and let the other stoves go out? It's no matter if we are a little crowded," says she.

"Well, of course, it was the only thing to do, as we see at once when it was put into our heads. We took the car the sick lady was in, so she'd not have to be disturbed, and we made up beds for the children, and somehow all the passengers managed to pack in, train hands and all. It was a tight squeeze, but that didn't matter so much, because the weather was so awful cold."

"That was the way I come to see so much of the young lady. I hadn't anything to keep me about the engine, so I kind of detailed myself on to wait on her. She was busy all day long doing things for the rest. It's queer how people's characters come out at such times. We got to know all about each other. People stopped siring and malingering and being polite, and just showed for what they were worth. The selfish ones, and the shirks, and the cowards, and the mean cusses who wanted to blame some one besides the Almighty for sending the weather—there was no use for any of them to try to hide themselves any more than it was for the other kind. The women, as a rule, bore up better than the men. It comes natural, I suppose, for a woman to be kind and silent and pale and patient when she's suffering. But the young lady wasn't that sort, either. She was as bright as a button all along. You'd have supposed from her face she was having just the best kind of a time."

"I can see her now, standing before the stove roasting jack-rabbits for the others' supper. Some of the gentlemen had revolvers, and when the snow got crusted over so's they could walk on it, they used to shoot 'em. And we were glad enough of every one shot, provisions were so scanty. The last two days them rabbits and snow water melted in a pail over the stove was all we had to eat or drink."

"I suppose there was nothing for you to do but to wait," said Miss Vaughn.

"No, ma'am; there wasn't nothing at all for me to do but help the young lady now and then. She let me help her more than the rest, I used to think. She'd come to me and say, 'Mr. Scott, this rabbit is for you and the conductor.' She never forgot anybody—except herself. Once she asked me to hold the sick little girl while she took a sleep. It was mighty pretty always to see her with them children. They never seemed to have enough of her. All of them wanted to have her put them to bed, and sing to them, and tell them stories. Sometimes she'd have all five swarming over her at once. I used to watch them."

"Well, how did it end?" asked Miss Vaughn.

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RECONSTRUCTION.

Two girls sat on a broad veranda of a Southern hotel, while a fine, soldier-looking man passed slowly by.

"Look, Estelle!" exclaimed the younger of the two girls, "I dare say there is a true Southerner who fought for the 'Lost Cause'."

"Yes," said Estelle, "and there is your brother Tom, and he is bringing the stranger here."

Both the girls fluttered a little, then settled into feigned unconsciousness of any approach, until they were roused by Tom Vaughn's introduction of his friend, Colonel Dalton. Tom informed them the Colonel was a stupid yellow boy, and altogether the party seemed alarmingly defenseless to Colonel Dalton. He spoke earnestly to Tom about the danger from marauding bands, and the necessity of keeping a close watch on so wild and dangerous a road.

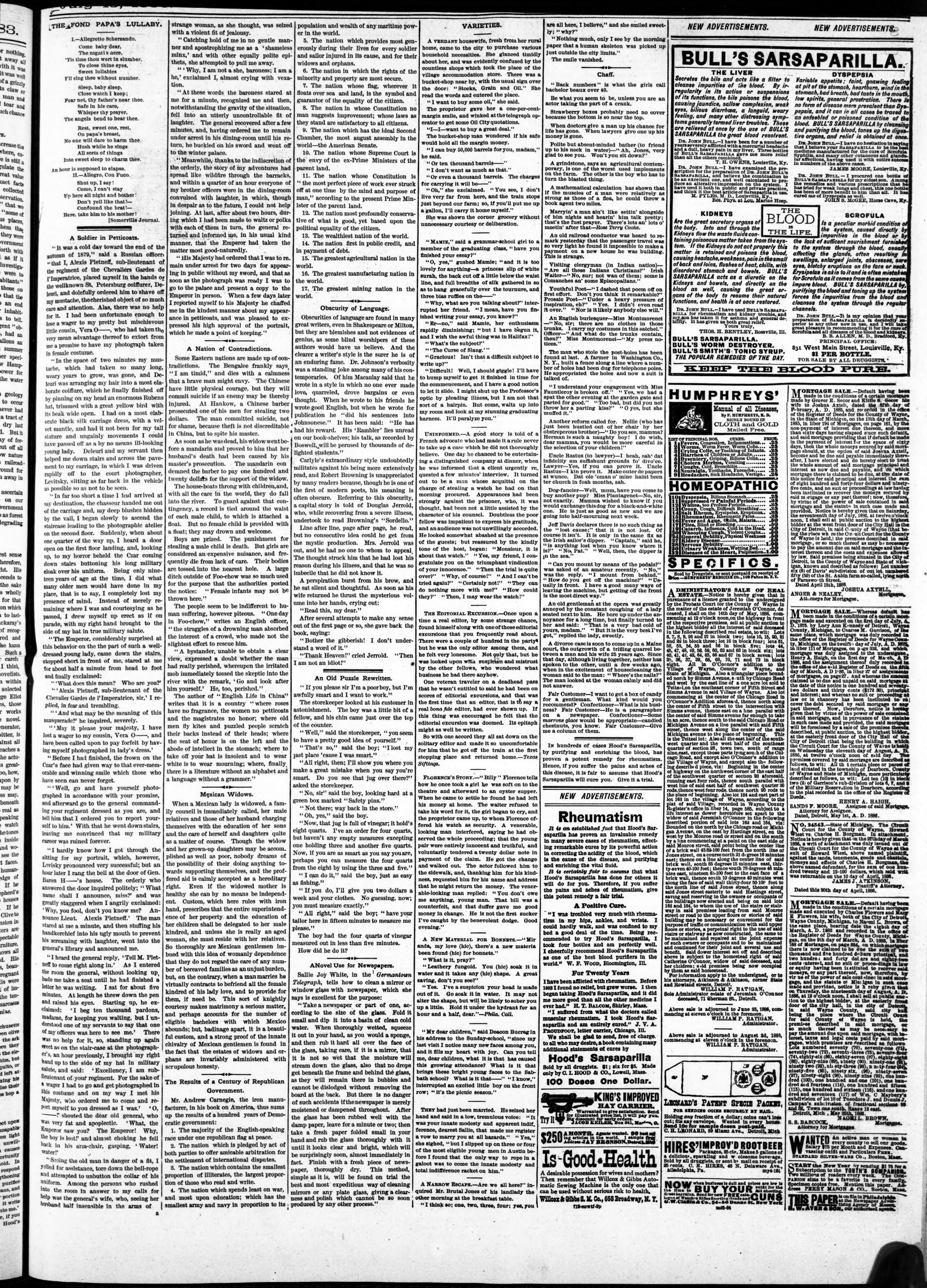
"What are you two looking so solemn about?" called Camille from the carriage.

"Colonel Dalton has just warned me of a danger that had not occurred to me," answered his brother.

"The country is full of poor devils let loose from the army, and this might be a rather tempting affair to them," and he glanced dubiously at the carriage.

"Pshaw!" cried Camille, "they would never molest a true Southern family."

"Certainly, Miss Camille," simpered D'Aumale. "I will defend you with my life. Our Northern friend is



GUARDING AGAINST TEXAS FEVER.

Rules and Regulations Established by the Live Stock Sanitary Commission for the Handling of So-Called Texas Cattle at Detroit for the Summer of 1886.

WHEREAS, by Act 182, Session Laws of 1885, it is made the duty of the Live Stock Sanitary Commission to protect the health of the domestic animals of the State from all contagious or infectious diseases, and for this purpose it is authorized and empowered to establish, maintain and enforce such quarantine, sanitary and other regulations as may deem necessary.

WHEREAS, the driving of so-called Texas cattle, or cattle raised south of the 36th parallel of north latitude, and that have not been kept at least one winter north of that latitude, is exceedingly dangerous to the health of all northern cattle that may chance to come in contact with them, or that may pass over the same routes traveled by the Southern cattle referred to.

It is hereby ordered by the Live Stock Sanitary Commission that all cattle that cannot be absolutely identified as cattle that have passed the previous winter north of the 36th parallel of north latitude shall be required to be driven from the Stock Yards at Detroit to the various slaughter houses only upon the following streets, viz:

From Central Yards, Dix road and Dix avenue; Baker street, Twenty-first street, from Baker to Michigan avenue, Seventh street, from Baker to Michigan Avenue, Sixth street, from Michigan to Locust street.

From King's Yards, down Twelfth to Grand River avenues, to Michigan Avenue, down Michigan Avenue to Foundry street, up Grand River to Woodward Avenue, to Larned street, to Riopelle street.

None of the above specified cattle shall be permitted to drive upon pasture or to any other yard or barn than is connected with the various slaughter houses.

All owners of northern cattle are hereby cautioned and warned against using, and are directed not to use, any of the above named streets or portions of streets designated for driving Texas cattle until the first day of November next.

By order of the Live Stock Sanitary Commission.

H. H. HINDS, President of Commission.
Dated STANTON, Mich., June 10, 1886.

Michigan Crop Report, July 1, 1886.

For this report returns have been received from 780 correspondents, representing 622 townships. Five hundred and twenty-seven of these returns are from 379 townships in the southern four tiers of counties.

The area of the 1886 wheat crop, as returned by superintendents, is in the southern four tiers of counties, 1,357,578 acres, and in the northern counties 243,206 acres, a total of 1,600,784 acres. Final corrections, and spring wheat sowings which were not completed at the time the assessment was taken, will probably add 25,000 acres, making the total area of the 1886 wheat harvest, 1,625,784 acres.

The average per acre as estimated by correspondents, is 13 and 68-hundredths bushels, indicating a probable yield in the State of 22,239,686 bushels.

The wheat crop has evidently been badly injured by the Hessian fly. The presence of the fly has been reported by 97 correspondents in the first or south tier of counties, by 69 correspondents in the second tier, by 44 in the third, and 25 in the fourth tier. The number of correspondents in each of the southern four tiers reporting damage by Hessian fly is as follows: Allegan 4, Barry 7, Berrien 9, Branch 12, Calhoun 24, Cass 10, Clinton 5, Eaton 9, Genesee 1, Hillsdale 17, Ingham 5, Ionia 4, Jackson 13, Kalamazoo 13, Kent 7, Lapeer 2, Lenawee 24, Livingston 4, Macomb 12, Monroe 10, Oakland 3, Ottawa 1, Shiawassee 2, St. Clair 3, St. Joseph 15, Van Buren 7, Washtenaw 12, Wayne 0; total 235. The returns of supervisors, partially corrected, show the area of wheat harvested in 1885 to have been 1,497,470 acres, and the yield, 29,927,543 bushels. The final corrections will increase this area by at least 35,000 acres, and the yield by 700,000 bushels, making the total about 1,532,470 acres, and 30,627,543 bushels.

Reports have been received of the quantity of wheat marketed by farmers during the month of June at 277 elevators and mills. Of these 229 are in the southern four tiers of counties, which is 44 per cent of the whole number of elevators and mills in these counties. The total number of bushels reported marketed is 430,676, of which 90,373 bushels were marketed in the first or southern tier of counties; 120,483 bushels in the second tier; 68,262 bushels in the third tier; 115,438 bushels in the fourth tier; and 36,165 bushels in the counties north of the southern four tiers. At 60 elevators and mills, or 22 per cent of the whole number from which reports have been received, there was no wheat marketed during the month.

The total number of bushels of wheat reported marketed in the 11 months, August-June, is 14,044,903, or about 46 per cent of the crop of 1885. The number of bushels reported marketed in the same months of 1884 and 1885 was 8,468,513, or 33 per cent of the crop of 1884. For these months in 1884-5 reports were received from about 37 per cent, and in 1885-6 from about 48 per cent of the elevators and mills in the southern four tiers of counties.

In the southern four tiers of counties 10 per cent, and in the northern counties 4 per cent—about 2,732,000 bushels—of the 1885 wheat crop is yet in farmers' hands.

The condition of other crops, compared with vitality and growth of average years, is, for the State, as follows: Corn, 92 per cent; oats, 85; barley, 89; clover, meadows and pastures, 79; timothy, meadows and pastures, 74; and clover sowed this year, 81 per cent. The condition of corn compared with July 1, 1885, is 113. Seven per cent of the corn planted failed to grow.

Apples, in the southern four tiers of counties, promise 94 per cent, and in northern counties 86 per cent of an average crop.

The weather is extremely dry. Complaints of the drought come from every part of the State. At Lansing the rainfall during June amounted to only 2 and 14-hundredths inches, as compared with 4 and 37-hundredths inches, the average for 20 years, as recorded at the State Agricultural College. No rain has fallen in July to this date (July 9). Of course meadows and pastures are drying up and the oat crop is injured.

The British Grain Trade.

The Mark Lane Express of yesterday, in its review of the British grain trade during the past week, says:

"The weather is fine, favoring blossoming. The wheat trade is firm. The sales of English wheat during the past week were 29,391 qrs at \$05 9d, against 28,241 qrs at \$08 8d during the corresponding period last year. Flour is very dull. There were thirteen arrivals of wheat cargoes. Four cargoes were sold and three were withdrawn. There was almost nothing doing in the trade forward. At to-day's markets wheats and flour were slow and prices were unchanged."

Veterinary Department

Sweenie a Symptom, Not a Disease.

ADRIAN, June 24, 1886.
Veterinary Editor of the Michigan Farmer.

I have a bay mare, four years old, weight 1,150 pounds, which I bought of a neighbor in February last. He broke her last fall and drew wood eight miles to market during the winter. A short time before I bought her he told me he was afraid he had sweenie the colt, as she was lame forward. Afterward she was not lame and he sold her to me for a sound horse. I soon found she was lame, and our local surgeon is doctoring her for sweenie with soft soap and salt. Her hind legs were stocked, and it was with difficulty I could back her out of stall, dragging her hind legs as she backed. In driving she traveled sideways, throwing her hind parts to the right, and had trouble in bringing her right hind leg forward. At times there seemed to be a catch somewhere which I thought was a cramp in the cords on the back side of the leg above the hock; at such times she would hit her legs together badly. Our local surgeon says it is a strain in the whirlbone joint. She is running at pasture now; her legs are not stocky but a little boggy. Can you help me?

OLD SUBSCRIBER.

Answer.—Before we can advise you with reference to your mare, we must have some symptoms upon which to base our diagnosis.

Sweenie is not a disease, but a symptom only—a stumbling block to the amateur veterinary surgeon. Many valuable animals have been ruined by this misnomer.

The qualified veterinary surgeon does not treat sweenie as a disease, but simply regards it, as it is, a symptom of disease indicating no particular part of the fore arm. Diseases of the foot, pastern, fetlock, knee, when chronic, cause the symptom known as sweenie, or atrophy of the muscles of the shoulder. Lameness must first be located, and its character determined, before we can treat it understandingly. The description of the hind parts gives us no reliable diagnostic symptoms. The animal was too young to perform the labor imposed upon her during the winter, which was probably the primary cause of her present condition. We would advise you to call an experienced veterinary surgeon to examine and prescribe for her.

Too Early Breaking and Driving Young Colts.

Veterinary Editor of the Michigan Farmer.

I have a brown mare colt, three years old, weighs about 1,300 pounds, and a fine easy traveler. A few days ago I had occasion to drive her about 26 miles; she jogged the first 13 miles in about two hours, had a rest of two hours. Showed no sign of distress or lameness, but after standing three or four hours stood with both her ankles badly cocked. Was all right the next day. While ankles were cocked they were quite sensitive to the touch. Did not appear to have much heat. Please give cause and remedy and oblige

A SUBSCRIBER.

Answer.—The colt is too young for such a drive. Many very promising colts have been ruined for life by such treatment. Early handling without driving until matured would increase the longevity of the horse two-fold, together with a more perfect development of the animal physically, and would also be financially more profitable to the owner. That single drive has probably lessened the value of your animal fifty per cent. Shower the ankles with cold water once or twice a day; then apply with hand friction, Jennings' Evinco Liniment. Give moderate exercise, or turn in a paddock.

Cryptorchid Bull.

MONTGOMERY, July 5th, 1886.
Veterinary Editor of the Michigan Farmer.

I have a young Shorthorn bull nine months old, red in color, that has apparently only one testicle. I had an opportunity to sell him, but he was objected to on the above grounds. Will he prove a breeder? I have never had him serve any, but he is very fat, and is all right every way except as stated. An examination failed to discover the other testicle. An answer through the

FARMER would greatly oblige.

SUBSCRIBER.

Answer.—Cryptorchid animals are not generally used for breeding purposes. If the concealed testicle is in a normal condition we see no reason why he should be condemned for breeding purpose. "The trial is the proof."

DETROIT WHOLESALE MARKET.

DETROIT, July 13, 1886.

FLOUR.—Market quiet, easy and unchanged. Quotations yesterday were as follows:

Michigan white wheat, stone process \$0 50 @ 40

Michigan white wheat, roller process 4 00 @ 45

Michigan white wheat, patents 4 50 @ 75

Minneapolis, bakers 4 00 @ 30

Low grade winter wheat 2 85 @ 25

Rye 2 85 @ 25

Penn. No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 6